

**What is claimed is:**

1           1.    A thin film transistor-LCD, comprising:  
2           a transparent substrate provided with at least two  
3           adjacent gate electrodes;  
4           a gate insulating layer on the gate electrodes;  
5           a semiconductor layer in a predetermined shape on  
6           the insulating layer;  
7           a source/drain electrode layer on a predetermined  
8           area of the transparent substrate;  
9           an insulating layer on the source/drain electrode  
10          layer;  
11          a contact hole via the insulating layer,  
12          source/drain electrode layer, and gate  
13          insulating layer, exposing a part of the  
14          surface of transparent substrate between the  
15          adjacent gate electrodes;  
16          a transparent conductive layer on the transparent  
17          substrate; and  
18          a light-shielding matrix directly above the contact  
19          hole.

1           2.    The thin film transistor-LCD as claimed in  
2           claim 1, wherein the gate electrode is a Mo-Al-Nd  
3           electrode.

1           3.    The thin film transistor-LCD as claimed in  
2           claim 1, wherein the source/drain electrode layer is an  
3           Al, Al-Nb, Al-Nd, Al-Ti or Al-Si-Cu layer.

1           4.    The thin film transistor-LCD as claimed in  
2    claim 1, wherein the gate insulating layer is an oxide  
3    layer formed by chemical vapor deposition.

1           5.    The thin film transistor-LCD as claimed in  
2    claim 1, wherein the insulating layer is an oxide or  
3    nitride layer formed by chemical vapor deposition.

1           6.    The thin film transistor-LCD as claimed in  
2    claim 1, further comprising a color filter a  
3    predetermined distance above the transparent substrate,  
4    wherein the light-shielding matrix directly above the  
5    contact hole is disposed on the color filter.

1           7.    The thin film transistor-LCD as claimed in  
2    claim 1, wherein the gate electrodes are separate from  
3    the contact hole.

1           8.    A thin film transistor-LCD, comprising:  
2           a transparent substrate provided with at least two  
3           adjacent gate electrodes;  
4           a gate insulating layer on the gate electrodes;  
5           a semiconductor layer in a predetermined shape on  
6           the insulating layer;  
7           a source/drain electrode layer on a predetermined  
8           area of the transparent substrate;  
9           an insulating layer on the source/drain electrode  
10          layer;  
11          a contact hole, separate from the gate electrodes,  
12          via the insulating layer, source/drain  
13          electrode layer, and gate insulating layer,

14 exposing a part of the surface of transparent  
15 substrate between the adjacent gate electrodes;  
16 an indium thin oxide layer on the transparent  
17 substrate;  
18 a color filter provided a predetermined distance  
19 above the transparent substrate; and  
20 a light-shielding matrix on the color filter,  
21 directly above the contact hole.

1 9. The thin film transistor-LCD as claimed in  
2 claim 8, wherein the gate electrode is a Mo-Al-Nd  
3 electrode, and the source/drain electrode layer is an Al,  
4 Al-Nb, Al-Nd, Al-Ti or Al-Si-Cu layer.

1 10. The thin film transistor-LCD as claimed in  
2 claim 8, wherein the gate insulating layer is an oxide  
3 layer and the insulating layer is an oxide or nitride  
4 layer formed by chemical vapor deposition.

1 11. A method of fabricating a thin film transistor-  
2 LCD, comprising:  
3 depositing a first metal layer on a transparent  
4 substrate;  
5 patterning the first metal layer to form at least  
6 two adjacent gate electrodes;  
7 forming a gate insulating layer on the gate  
8 electrodes;  
9 forming a semiconductor layer on the insulating  
10 layer;  
11 patterning the semiconductor layer into a  
12 predetermined shape;

13            depositing a second metal layer on the transparent  
14            substrate;  
15            patterning the second metal layer to form a  
16            source/drain electrode layer;  
17            depositing an insulating layer on the transparent  
18            substrate;  
19            defining a contact hole via the insulating layer,  
20            source/drain electrode layer, and gate  
21            insulating layer, exposing a part of the  
22            surface of transparent substrate between the  
23            adjacent gate electrodes;  
24            depositing a transparent conductive layer on the  
25            transparent substrate; and  
26            forming a light-shielding matrix directly above the  
27            contact hole.

1            12. The method as claimed in claim 11, wherein the  
2            gate electrode is a Mo-Al-Nd electrode.

1            13. The method as claimed in claim 11, wherein the  
2            source/drain electrode layer is an Al, Al-Nb, Al-Nd, Al-  
3            Ti or Al-Si-Cu layer.

1            14. The method as claimed in claim 11, wherein the  
2            gate insulating layer is an oxide layer formed by  
3            chemical vapor deposition.

1            15. The method as claimed in claim 11, wherein the  
2            insulating layer is an oxide or nitride layer formed by  
3            chemical vapor deposition.

1           16. The method as claimed in claim 11, further  
2           comprising a step of providing a color filter a  
3           predetermined distance above the transparent substrate,  
4           wherein the light-shielding matrix directly above the  
5           contact hole is disposed on the color filter.

1           17. The method as claimed in claim 11, wherein the  
2           gate electrodes are separated from the contact hole.

1           18. A method of fabricating a thin film transistor-  
2           LCD, comprising:

3           depositing a first metal layer on a transparent  
4           substrate;

5           patterning the first metal layer to form at least  
6           two adjacent gate electrodes by  
7           photolithography;

8           forming a gate insulating layer on the gate  
9           electrodes;

10          forming a semiconductor layer on the insulating  
11          layer;

12          patterning the semiconductor layer into a  
13          predetermined shape by photolithography;

14          depositing a second metal layer on the transparent  
15          substrate;

16          patterning the second metal layer to form a  
17          source/drain electrode layer by  
18          photolithography;

19          depositing an insulating layer on the transparent  
20          substrate;

21           defining a contact hole by photolithography,  
22           separated from the gate electrodes, via the  
23           insulating layer, source/drain electrode layer,  
24           and gate insulating layer, exposing a part of  
25           the surface of transparent substrate between  
26           the adjacent gate electrodes;  
27           depositing an indium tin oxide layer on the  
28           transparent substrate;  
29           providing a color filter a predetermined distance  
30           above the transparent substrate, having a  
31           light-shielding matrix directly above the  
32           contact hole.

1           19. The method as claimed in claim 18, wherein the  
2           gate electrode is a Mo-Al-Nd electrode; the source/drain  
3           electrode layer is an Al, Al-Nb, Al-Nd, Al-Ti or Al-Si-Cu  
4           layer.

1           20. The method as claimed in claim 18, wherein the  
2           gate insulating layer is an oxide layer and the  
3           insulating layer is an oxide or nitride layer formed by  
4           chemical vapor deposition.